

## ABSTRACT

An arc fault protection device uses two detection levels for detecting both parallel and series arc faults. When a sensed load current is below a predetermined level, a first set of characteristics indicative of a series arc fault are compared to a sensed  $di/dt$  signal. When the sensed load current exceeds the predetermined level, a second set of characteristics indicative of a parallel arc fault are compared to the sensed  $di/dt$  signal. This approach allows more time to evaluate a potential series arc fault than is permitted when evaluating a potential parallel arc fault.